Remarks

Claims 1-8, 14, 15, 22-25 and 31-34 are currently pending in this application. Claims 1 and 22 are independent. Claim 1 is currently amended.

Rejection Under 35 U.S.C. § 112, first paragraph

Claims 22-25 are rejected under 35 U.S.C. § 112, first paragraph, because the phrase "in an inverse pattern" is deemed to be new matter. Applicant has amended claim 22 to delete the phrase, "in an inverse pattern", thereby obviating the rejection.

In view of the above, it is respectfully submitted that claims 22-25 are currently in condition for allowance.

Rejection Under 35 U.S.C. § 102

Claims 1-3, 7 and 8 are rejected under 35 U.S.C. §102(b) as being anticipated by Lake U.S. Patent No. 5,987,739 ("Lake").

Lake discloses a polymer based circuit production method comprising the steps of: (1) treating a surface of a polymer substrate with ultraviolet radiation by directing the ultraviolet radiation in a region proximate the polymer substrate surface in the absence of a flow of ozone being supplied into the region the treatment resulting in an ultraviolet radiation treated polymer substrate surface for promoting adhesion of the surface to a coating material; (2)forming at least one circuit on the polymer substrate surface; and (3) applying the coating material to at least a portion of the ultraviolet radiation treated polymer substrate surface.

The present invention provides a method of producing a thin and flexible RF antenna tag or label which contains an RF circuit connected to an antenna which is created by demetallizing

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the area around the antenna pattern on a thin, metallized substrate such as a film or paper web. In particular, the demetallization process involves applying an etchant to the metallized substrate using a conventional flexographic printing press. The method may also involve placing a holographic image or optical structure on the metal of the antenna.

Independent claim 1 of the present invention has been amended to recite a method for formation of a radio frequency antenna of a predetermined pattern on a surface of a substrate, comprising: (1) applying a metal layer to a surface area of the substrate, (2) applying an etchant to the predetermined pattern to the metal layer *using a flexographic printing press* and thereafter removing a portion of the metal layer comprising all metal within the surface area on the substrate other than metal in the predetermined pattern comprising the antenna, and (3) *placing a holographic image or optical structure on the metal of the antenna.* (*emphasis* added). Lake fails to disclose applying an etchant using a flexographic printing press. Moreover, Lake does not teach placing a holographic image or optical structure on the metal of the antenna.

In view of the above, it is respectfully submitted that Lake fails to anticipate claim 1 (and claims 2, 3, 7 and 8, which depend therefrom).

Claims 1-8 are rejected under 35 U.S.C. §102(e) as being anticipated by Moren U.S. Patent No. 6,281,842 ("Moren"). Moren teaches a method for manufacturing an antenna device comprising at least one printed circuit on a flexible substrate, where said printed circuit comprises at least one radiating element. Similar to Lake, Moren fails to disclose applying an etchant using a flexographic printing press, and also fails to teach placing a holographic image or optical structure on the metal of the antenna, as required by independent claim 1.

In view of the above, it is respectfully submitted that Moren fails to anticipate claim 1 (and claims 2-8, which depend therefrom).

Rejection Under 35 U.S.C. § 103(a)

Claims 1, 2, 7, 8, 14, 15 and 31-34 are rejected under 35 U.S.C. §103(a) as being unpatentable over Horne et al. U.S. Patent No. 5,861,226 ("Horne").

Horne discloses a method of fabricating a resonant micromesh filter having conductive antenna elements sized on the order of microns, comprising the steps of: (1) creating an exposure mask having absorbing portions capable of stopping incident ions completely and transmitting portions incapable of stopping incident ions and through which incident ions can pass, the absorbing and transmitting portions formed in the mask in the pattern of the antenna elements to be fabricated, (2) positioning the exposure mask confronting an unpatterned filter, the unpatterned filter including a substrate, a thin metal foil mounted on the substrate, and a resist material covering the metal foil, (3) passing ions through the exposure mask wherein the absorbing portions of the mask stop the ions and the transmitting portions allow ions to pass through the mask and expose a section of the resist material of the filter in the pattern of the antenna elements, (4) repositioning the exposure mask over an area of the unpatterned filter not previously exposed to incident ions and repeating step (3) (5) repeating step (4) until a desired surface area of the unpatterned filter has been exposed, and (6) processing the exposed unpatterned filter to produce a conductive antenna array supported by a substrate.

As set forth hereinabove, independent claim 1 of the present invention has been amended to recite: (1) applying an etchant to the predetermined pattern to the metal layer *using a flexographic printing press*; and (2) *placing a holographic image or optical structure on the metal of the antenna.* Like Lake and Moren, Horne fails to disclose either of these limitations.

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In view of the above, it is respectfully submitted that Horne fails to render obvious claims 1, 2, 7, 8, 14, 15 and 31-34.

Conclusion

Based on the foregoing, favorable reconsideration and allowance of claims 1-8, 14, 15, 22-25 and 31-34 is solicited. If necessary, the Commissioner is hereby authorized in this and concurrent replies to charge payment (or credit any overpayment) to Deposit Account No. 19-1853 for any additional required fees.

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Respectfully submitted,

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